

Title (en)

LED device with voltage-limiting unit and shunt current-limiting resistance

Title (de)

LED-Vorrichtung mit Spannungsbegrenzungseinheit und Querstrombegrenzungswiderstand

Title (fr)

Dispositif DEL avec unité de limitation de tension et résistance de limitation de courant de dérivation

Publication

**EP 2487994 A2 20120815 (EN)**

Application

**EP 12154768 A 20120209**

Priority

- US 201113025296 A 20110211
- US 201113025331 A 20110211

Abstract (en)

The present invention provides a LED device with the voltage-limiting unit and the shunt current-limiting resistance wherein a voltage-limiting unit is connected in series with a current-limiting resistance then connected in parallel with two ends of a LED, so that to constitute the light-emitting unit, thereby when plural of the light-emitting units are connected in series (including connected in series and parallel), the current of LED loaded with higher end voltage passing through the voltage-limiting unit is prevented to be overly high when subject to abnormal high voltage.

IPC 8 full level

**H05B 33/08** (2006.01); **H05B 44/00** (2022.01); **H05B 45/50** (2022.01)

CPC (source: EP US)

**H05B 45/40** (2020.01 - EP US); **H05B 45/50** (2020.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 2487994 A2 20120815; EP 2487994 A3 20131120;** CN 102685974 A 20120919; CN 202514100 U 20121031; JP 2012178559 A 20120913;  
SG 183624 A1 20120927; TW 201242420 A 20121016; TW M440403 U 20121101

DOCDB simple family (application)

**EP 12154768 A 20120209;** CN 201210029908 A 20120210; CN 201220043351 U 20120210; JP 2012026141 A 20120209;  
SG 2012008900 A 20120208; TW 101104144 A 20120209; TW 101202318 U 20120209